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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,891	09/18/2001	Robert Billingsley	007102.00001	9805

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EXAMINER

DANG, HOANG C

ART UNIT PAPER NUMBER

3672

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/954,891

Applicant(s)

BILLINGSLEY, ROBERT

Examiner

Hoang Dang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 7-11 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-4 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 calls for "means for driving the drill bit through the hollow segments".

According to the specification, original claim 5 and claim 6 and applicant's remarks, the "means for driving the drill bit through the hollow segments" could be a drill stem extending through the hollow segments and attached to the drill bit to drive the drill bit or a hydraulic fluid passing through the hollow segments to the drill bit to power the drill bit.

In response to the 112 first paragraph rejection of claims 5-6 in the previous Office action applicants has cancelled claim 5. Claim 6 has been amended but still calls for the use of a hydraulic fluid flowing through the hollow interior of the segments to drive the drill bit.

Claim 6 recites that the drill bit driving means utilizes a hydraulic fluid flowing through the hollow interior of the segments to drive the drill bit. However, the disclosure fails to show or/and disclose how hydraulic fluid is supplied to and returned from the drill bit, and in what

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manner the hydraulic fluid drives the drill bit and what happens each time a hollow segment is added or removed from the drill string.

Regarding claim 6, applicant argues that the information is already known to people of ordinary skill in the art to which the invention pertains. However, applicant fails to submit any evidence to support applicant's contention. It is noted that the claimed apparatus operates in an inaccessible hole having a diameter of less than six inches (page 2, line 27) and a large portion of this space has already been occupied by the magazine containing hollow pipe segments. It is known in the well drilling art to rotate a drill bit with drilling fluid that is pumped into the upper end of a drill string from the surface where space is not a problem - not in an inaccessible hole or for use in drilling a horizontal hole from a vertical hole where pipe segments are added into or removed from a horizontal drill string one by one as the case we have here.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Vaughn et al (US 3,301,337) (see "drill bit" 14a, "hollow segments" 14, "driving means" 29, "magazine" 26 and "load cell" 24) or Walker (US 2,889,137) (see Figures 1-5) or Thompson (US 5,622,231) (see Figures 1-16) or Eckenfels et al (US 6,050,351) (see Figures 4-6).

*Response to Arguments*

4. Applicant's arguments filed September 20, 2004 have been fully considered but they are not persuasive.

Regarding the Vaughn et al reference, the claimed "drill bit" does not define over the first segment 14a of Vaughn et al. This "first segment" does cut through the casing and forming a hole in the formation as it is pushed from behind. Claim 1 is clearly silent regarding whether the drill bit is driven by rotation or pushing. With respect to the limitation of "through the hollow segments", since the force exerted on the first segment 14a is transmitted from the nose 28 of anvil 29 to the first segment (or "drill bit") 14a through (by means of) hollow pipe segments positioned between the first segment 14a and nose 28, the "means for driving the drill bit through the hollow segments" do not distinguish from the "driving means" of Vaughn et al. It is noted that claims 1-4 do not require the use of hydraulic fluid to turn the bit as applicant argued.

Regarding the Walker patent, contrary to applicant's argument, Figures 1 and 2 clearly show one of the plurality of hollow segments in the vertical borehole attached (indirectly) to drill bit 38. The claims do not require that the drill bit and the first (lowermost in the magazine) hollow segments are attached and both are in the vertical borehole at the same time as applicant argued. In Walker, rotational force is transmitted from gear 88 to the drill bit through hollow segments 28, Walker therefore has "means for driving the drill bit through the hollow segments" as recited. Again, claims 1-4 do not require the use of a hydraulic fluid to drill the bit.

With respect to the Thompson reference, figures 3 and 5 clearly shows a plurality of hollow segments 38 in the vertical wellbore and one of which is attached (indirectly) to the drill

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bit 32 as recited in claim 1. Again, the claims do not require that the drill bit and the first (lowermost in the magazine) hollow segment are attached and both are in the vertical borehole at the same time as applicant argued. In Thompson, since the forward force exerted on the drill bit is transmitted from the insert ram 36 to the drill bit 32 through (by means of) hollow segments 38, Thompson apparently has "means for driving the drill bit through the hollow segments" as recited

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

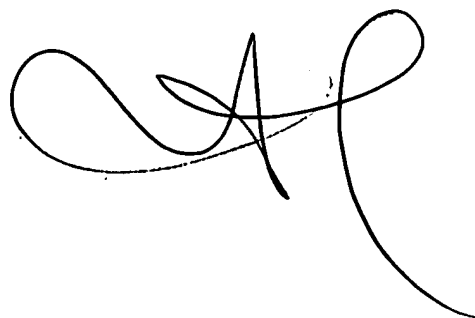
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Dang whose telephone number is 703-308-2149. The examiner can normally be reached on 9:15-5:45 Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoang Dang  
Primary Examiner  
Art Unit 3672

A handwritten signature in black ink, appearing to be 'HD' with a large loop and a long trailing stroke.